

REMARKS

Applicant thanks the examiner for his attention to the application. Applicant has amended the claims 1-25 to forms indicated to be allowable. That is, independent claims 1, 14, 16, and 20 have been amended to include the limitations of claim 6 and as such should be allowable. New independent claim 25 includes the limitations of claims 1, 6 and 7. All dependent claims related to the foregoing independent claims should also be allowable through the presented novel combinations with an allowable base claim.

Claims 1-24 are pending in the application. Claims 6 and 7 are objected to but are indicated to be allowable if amended to include the limitations of the base claim and any intervening claims. Claims 5 and 22-24 stand rejected under 35 USC §112 in regard to certain language, which will be corrected with the response. Claims 1-4, 8, 9, 13-16 and 18-21 stand rejected as being obvious under 35 USC §103 over either Arnold or Siegal in view of Burns, Rufolo, Irwin or Clifford. Claims 5 and 22-24 stand rejected as being obvious under 35 USC §103 over the foregoing patents and further in view of Irwin. Claims 10-12 and 17 stand rejected as being obvious under 35 USC §103 over the same art applied to claims 1, 14, 16 and 22 and further in view of Laky and Haase.

Arnold is cited for showing a pipe-cleaning machine having a flexible cable 40 that is extended and retracted from a reel 26, guide tube 46 and rotating feed rollers 74,76. The cable 40 typically supports a cutting head that mechanically cleans a pipe through which the cable is directed, column 1, lines 21-30.

Nowhere does Arnold suggest or provide any suggestion or motivation to substitute a hose or other water-conveying conduit for his cable and/or to couple a high-

pressure, water source to the substituted hose and/or mount orifices to a spray tip to the substituted hose to clean a tube solely with the high-pressure water spray.

Siegal discloses a hydraulically operated sewer cleaning assembly having a rotating cage 14 and rotating feed roller assembly that act on a “continuous length of flexible steel rod stock R” and to the end of which rod R is attached a “suitable boring or reaming tool”, column 3, line 58- column4, line 24.

Like Arnold, nowhere does Siegel suggest or provide any motivation to substitute a hose or other conduit for the rod “R” and/or to couple a high-pressure, water source to the substituted hose and/or mount orifices to a spray tip to the substituted hose to clean a tube solely with the high-pressure water spray.

The examiner further argues that it would be obvious to modify the cable/rod of Arnold or Seigel with the reciprocating spray tips taught by Burns, Rufolo, Irwin or Clifford.

Upon a review of Burns, Rufolo, Irwin or Clifford, each discloses a cutter head that is adapted to support a separate hose or water-conveying conduit. The cutter heads, hose and spray assemblies of Burns, Rufolo, and Clifford, in turn, are mechanically directed with reciprocating pairs of cables. The individual cables are supported from independent carriages stationed at each end of the conduit being cleaned. The cable pairs are directed in a reciprocating fashion to pull the cutter heads and spray assemblies to and from within the conduits.

Otherwise, Irwin discloses cutter blades 66 mounted to a coil spring assembly 34 constructed of a helically wound spring wire 40. A flexible elastomeric tube 36 is supported **inside** the spring wire 40 and a spray jet head 46 is attached to the tube 36,

column 5, lines 10-35. The spring assembly 34, tube assembly 36 and head 46 are directed with a feed means 28 that cooperates with the rotational movement of the spring 34 to direct the cutter blades 66 and head 46 in a **screw** fashion.

Nowhere does Irwin suggest or provide any motivation to rely solely on the tube 36 and head 46 to achieve cleaning or suggest any drive mechanism for the tube 36. Moreover, even if Arnold or Seigel were modified to include Irwin's spray head 46, Irwin suggests only the inclusion of the tube 36 in the core of an outer cable or rod with passageways 48,50 being required to direct the water flow. Such modifications of Arnold or Seigel would require undue experimentation and still not yield the claimed invention.

In short, none of the cited references Arnold or Seigel alone or in combination with Burns, Rufolo, Irwin and/or Clifford discloses, suggests, teaches directly or inferentially or provides any motivation to arrive at applicant's claimed assembly of an axially, reciprocating, pinch-roller drive in combination with a reel to provide a rotatively driven hose that synchronously directs the hose to deliver high-pressure water to clean a tube. The foregoing distinguishing features and others are provided for at each of the amended claims 1-26 and therefore the application is believed to be in a condition for allowance.

Otherwise, Irwin is cited for showing a swivel assembly (108, 110), which the examiner argues it would have been obvious to include in either Arnold or Siegel as taught by Irwin. Laky and Haase are cited for showing external hose cleaning devices which the examiner argues it would have been obvious to include in either Arnold or Siegel.

In view of the foregoing amendments and distinctions, the application should be in a condition for allowance. No new matter has been entered with any of the foregoing amendments. Accordingly, applicant requests the examiner's reconsideration of the application and an early notice to the allowance thereof.

If any matters remain that can be handled with a telephone conference, the examiner is encouraged to contact the undersigned.

Respectfully submitted,

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Enclosures